



MEMORANDUM

TC
Agenda Item No. 1(E)3

TO: Hon. Chairperson Dennis C. Moss
and Members, Transportation Committee

DATE: April 22, 2004

FROM: George M. Burgess
County Manager

SUBJECT: Countdown Pedestrian
Signal Evaluation Report

At the February 10, 2004, Transportation Committee Meeting, Commissioner Barreiro requested an update on the study that was being done concerning timing clocks on pedestrian signals at intersections. Attached, please find the subject report.

Pedestrian Crossing Signalization Report

In response to an inquiry from the County Manager's Office in early 2002, the Public Works Department Traffic Signals and Signs Division staff proceeded to investigate the status of the Countdown Pedestrian Signals, with the Federal Highway Administration (FHWA). The Department was advised that this type of signal was a newly developed "experimental device", being tested throughout the Country. However, the device was not included in the Manual on Uniform Traffic Control Devices (MUTCD), published by the U.S. Department of Transportation, FHWA until the following year 2003, when it was accepted as an "Official Traffic Control Device".

Subsequently, in order to comply with a strict mandate established in the Florida State Statutes (FSS 316.0745), which affect all government agencies responsible for installation, operation and maintenance of traffic control devices in the State, the Public Works Department contacted the Florida Department of Transportation (FDOT) to determine if any of the experimental devices, which were in the process of being tested, had been issued a Certificate of Conformance, a Conditional Certificate of Conformance or a rejection. In the State of Florida this certificate had to be secured prior to the PWD's trial implementation.

Conditional Conformance by the FDOT gives a manufacturer the legal right to sell the device, and the governmental agency a legal right to purchase and install this traffic control device in the public Right-of-Way. Some additional requirements need to be fulfilled by both parties, during the State's evaluation process. After successful completion of the evaluation and within a specified time frame, the device either receives full approval or is decertified and must be removed.

EQUIPMENT PROCUREMENT:

The PWD learned that, only one manufacturer Tassimco, Inc., which is a relatively new company involved in the production of traffic control devices, had their product issued a "Conditional Certificate of Conformance" in March 2003.

The PWD contacted the sole supplier in the State of Florida, Control Specialists, for Tassimco, in June 2003 to inquire about the performance of the equipment, as well as its price. The Department was advised that the Countdown Pedestrian Signal Module (without housing) was selling for \$395 each, as opposed to the pedestrian signal modules (without housings) currently procured by the PWD, which are approximately \$170 each.

Nonetheless, in order to personally evaluate the Countdown Pedestrian Signals, in July 2003, the PWD and Control Specialists entered into a six-month loan/purchase joint agreement. FDOT District VI and FDOT Central Offices in Tallahassee were advised of the locations where these devices were installed, on a trial basis.

In August 2003 another manufacturer GELcore's Countdown Pedestrian Signal also received a Conditional Certificate of Conformance by the FDOT, thereby providing competition, which in turn lowered the price of these devices. Currently the price has dropped by approximately \$50 per module. The PWD believes, from experience that at the conclusion of a one year evaluation period, due to expire in August 2004, and upon the establishment of a Departmental policy, the price of these devices, although more costly per unit than those procured by the PWD, will become reasonably priced for future applications.

PRELIMINARY EVALUATION AND FINDINGS:

The evaluation test for the Countdown Pedestrian Signals began in early August 2003. The following evaluation sites were submitted for the FDOT's approval of their installation:

1. Collins Avenue (SR A-1-A) at 174 Street
2. South Dixie Highway (U.S. 1) at Mariposa Court
3. NW 2 Avenue at NW 2 Street

Locations number one and two are both six lane divided roadways (inc. medians), within the State Highway System. The third location is a County maintained road that has a three lane cross-section (two northbound and one southbound lane). These locations were selected due to the fact that they have a very high presence of pedestrian traffic, comprised of all ages. The Countdown Pedestrian Signal Heads were installed on only one crosswalk at each location, crossing the "major" roadway only. The pedestrians are crossing concurrently with the side-street or minor traffic movement.

The six-month initial evaluation period recently expired at the end of February 2004. Upon completion of this period, the PWD concluded that, based on observations, input received from the MPO, the FDOT Safety Office and the general public, that the devices provided added safety to the pedestrians and show some benefits. The PWD recognizes that these Countdown Pedestrian Signals are of value as an additional aid to a pedestrian while crossing the "major" roadway at certain types of pedestrian crossings. However, due to the way the County's current computerized traffic control system and the proposed Advanced Traffic Management System (ATMS) are timed to operate, these devices would not be beneficial for pedestrians crossing concurrently with the "major" movement across the side street or minor movement. Both the County's PWD and the FDOT's District Traffic Operations Engineer will be involved in a policy for the use of these devices, in lieu of the "standard" pedestrian signal heads, but only for selective installations throughout in Miami-Dade County.

Currently, the FDOT is expanding their evaluation to include both the North and South legs crossing at SW 107 Avenue and SW 16 Street, at the entrance to Florida International University (FIU). The State is installing them as part of a Pedestrian Safety Program in Miami-Dade County.

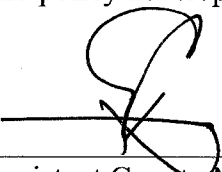
Additionally, the Public Works Department is assisting the University of Florida's Department of Civil and Coastal Engineering in a research project titled: "Pedestrian Safety Engineering and Intelligent Transportation System-Based Countermeasures Program for Reduced Pedestrian Fatalities, Injuries, Conflicts and Other Surrogate Measures" which is co-sponsored by the FHWA, FDOT and Miami-Dade County. The initial research, which took approximately two years, has recently been completed by the University, and is now in the implementation phase. This phase will include the installation of state-of-the-art pedestrian countermeasures, additional signage, etc. at over sixty (60) intersections in the County. As part of the implementation process additional Countdown Pedestrian Signals will also be installed. The PWD has just received a substantial amount of signal hardware supplied by the University Research Team and will begin installing them through the use of a new open ended signal contract. The PWD commitment, which was made in 2001 for the aforementioned efforts is limited to \$140,000.00. Upon completion of the installations, and after a reasonable period of time elapses, the Research Team will re-visit the sites to determine the effectiveness of the countermeasures and provide recommendations to develop national standards. Disbursement of the aforementioned \$140,000.00 shall be made out of each of the Road Impact Fee districts benefiting from the installations.

CONCLUSION AND PRELIMINARY RECOMMENDATIONS:

It is believed that upon completion of the study by the University of Florida for FHWA, the County and the FDOT will have sufficient input to develop policies on both the use and the placement of the Countdown Pedestrian Signal Heads. Based on the results and recommendations of the study, the PWD will be able to utilize this new equipment for certain types of pedestrian crossings in Miami-Dade County.

The PWD believes that pedestrian safety is of the utmost importance, and therefore, in addition to the Pedestrian Countdown Signal, the Department is also in the process of procuring and evaluating another state-of-the-art Pedestrian Signal and Pedestrian Pushbutton device for the visually impaired. In the opinion of the PWD the Audible-Tactile Pedestrian Signals would be of greater benefit in the County for those individuals whose visual impairment makes crossing a roadway much more difficult and more hazardous, as opposed to the Pedestrian Countdown Signal which is an amenity to those who can observe vehicle-pedestrian conflicts.

The Public Works Department will provide up-dates on this evaluation to the County Manager's Office, the County Commission and all other concerned parties as this evaluation and policy development process continues and pertinent information becomes available.



Assistant County Manager